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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,913	02/11/2002	Daniel J. Lisi	8540G-000118	8454
27572	7590	03/24/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			MERCADO, JULIAN A	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	

1745

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/074,913

Applicant(s)

LISI ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of claims 27-37 in the February 20, 2004 response is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 recites the limitation "a plurality of elongate support member" in line 4 of the claim. As the claim already recites "a plurality of elongate support members" in line 3 and it appears to the examiner that the second recitation is in reference to the first, it is suggested to change the indefinite article "a" to properly refer to the antecedent. Additionally, it is suggested to make plural the recitation of "member". The suggested amendment would result in "a plurality of elongate support member" being replaced by --the plurality of elongate support members--. At present, the second recitation of a plurality of elongate support members raises the indefinite issue as to whether or not the first and second plurality of elongate support members are mutually exclusive or the same.

Claims 28-37 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

*Claim Objections*

Claims 27 and 34 are objected to because of the following informalities:

Claim 27 recites the limitations “plurality of conductive continuous fibers”, “plurality of continuous fibers”, and “plurality of conductive elements” in line 5, line 9 and line 14, respectively. These limitations appear to be in reference to the same feature. It is suggested to amend the limitations so that all three recitations are exactly the same.

Claim 34 recites the limitation “first exposed surfaces”. It is suggested to make singular the recitation of this feature as claim 27 (from which claim 34 depends) does not recite a plurality of first exposed surfaces.

Appropriate correction is required.

*Allowable Subject Matter*

Claims 27-37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record and to the examiner’s knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding a lattice having a plurality of elongate support members and encasing said lattice in a polymeric material to form a separator plate.

The closest prior art, that to Walsh (U.S. Pat. 6,096,450) teaches a separator plate for a fuel cell having a plurality of conductive fibers [408]. Applicant’s claimed step of “arranging a plurality of elongated support members”, by way of a broad interpretation of Walsh, is shown by

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protuberances [554, 554'] which "serve to guide conductive fibers 408 which are disposed obliquely with respect to the protuberances into forming and/or supporting lands 504, 504', respectively". (col. 7 line 41-48) The protuberances are considered elongate in that the flow channels [204, 204'] which they effect are requisitely elongated. (col. 7 line 49-52, see also Figure 2)

As to the step of removing a portion of a first and a second surface, exposing each of said surfaces and severing the plurality of conductive fibers so that a first and second end terminates at the exposed surface, in Walsh a step of "abrading, sanding, or machining of lands 504, 504' on respective fluid flow faces 202, 202' desirably exposes electrical contacts 506, 506' to the underlying conductive matrix 406". (col. 8 line 20-23) Conductive matrix [406] notably comprises the conductive fibers [408]. (col. 7 line 19-27) As shown in Figure 4, the conductive fibers [408] extend through the entire thickness of the separator plate. It is reasonably presumed that the ends of the conductive fibers terminate at the exposed first and second surfaces as a result of the disclosed step of abrading, sanding or machining of said surfaces.

Walsh does not explicitly teach the plurality of elongate support members prepared as part of a lattice, and wherein the lattice is encased in a polymeric material to form the separator plate. Walsh is precluded from teaching or at least suggesting this feature since the plurality of elongated support members in Walsh are not *encased* in a polymeric material, but rather *encase* the polymeric material in its function as a mold. (emphasis added, col. 8 line 12) That is, even within the broad interpretation of elongated protuberances [554, 554'] of Walsh reading on the instant elongated support members, the elongated protuberances are not encased in a polymeric

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material. Thus, a lattice having a plurality of elongated support members are not formed as part of the separator plate, as in applicant's claimed invention.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. 6,607,857 B2 to Blunk et al. is cited as being commonly-owned. The patented method claims 18-24 and 42 are notably of similar scope to applicant's presently claimed invention but without the instant lattice having a plurality of elongate support members and encasing said lattice in a polymeric material to form a separator plate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Handwritten signature, possibly "AA", with the word "jam" written below it.



Patrick Ryan  
Supervisory Patent Examiner  
Telephone Center 1700